Scent signals stop incest in lemurs

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Chemical identifiers secreted from the genital glands of lemurs, allow them to avoid incest and also to engage in nepotism. Researchers writing in the open access journal *BMC Evolutionary Biology* have identified the smells used by both male and female ring-tailed lemurs to advertize their family ties.

Christine Drea from Duke University, North Carolina, USA, worked with Marylčne Boulet and Marie Charpentier from the same university to study the primate's scent secretions. She said, "We sampled 17 sexually mature females throughout the year, during the extended nonbreeding season and the relatively limited breeding season, and compared this information with data on 19 males that was taken from a previous study. By integrating genetic and biochemical data, we provide the first molecular evidence that the scent secretions expressed by the genital glands of male and female lemurs contain markers of relatedness within and between the sexes."

The scents released during the competitive breeding season were more similar between relatives than nonrelatives, leading the researchers to speculate that these markers encode information that is particularly relevant to avoid inbreeding with unfamiliar kin. The weaker signals of genetic relatedness existing throughout the year might also be useful in facilitating nepotism between family members. According to Drea, "Consistent with the scent secretions of other mammals, the genital secretions of lemurs are extremely complex and encode multiple messages. It will be interesting to find out what other messages are being transmitted by this fascinating form of communication".

More information: Decoding an olfactory mechanism of kin recognition and inbreeding avoidance in a primate, Marylene Boulet, Marie JE Charpentier and Christine M Drea, BMC Evolutionary Biology (in press), www.biomedcentral.com/bmcevolbiol/

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